## REMARKS

### I. SUMMARY OF THE OFFICE ACTION

Claims 216-233 were examined. Claim 216 was the independent claim.

In item 1 of the office action, the office action withdraws the rejections previously pending. In items 2-4 of the office action, the office action rejects claims 216-218, 221-225, and 227-230 under 35 USC 102(b) as anticipated based upon USP 5,800,532 to Lieberman. In items 5-7 of the office action, the office action rejects claims 231 and 232 under 35 USC 103(c) as obvious in view of Lieberman. In item 8 of the office action, the office action objects to claim 226 as depending upon a rejected base claim, indicating that claim 226 defines allowable subject matter. In items 9-10 of the office action, the office action rejects claims 219 and 220 under the second paragraph of 35 USC 112 as indefinite.

Claims 216-264 are now present. Claims 216 and 244 are the independent claims.

### II. INDEPENDENT CLAIM 216

Lieberman is directed to an "Asymmetric Intraocular Lens." Title. Lieberman describes "An intraocular lens ... which includes a ... second refractive power region ... asymmetrically disposed on the inferior nasal quadrant of the intraocular lens." Abstract. Lieberman Figs. 4 and 5 element 42 generally shows the Lieberman's "second refractive power region ... asymmetrically disposed on the inferior nasal quadrant of the intraocular lens." Lieberman discusses element 42 inter alia at column 7 lines 18-42. In addition, Lieberman column 8 lines 45-47 disclose that element 42 may have a monofocal diffractive element thereupon to provide "relatively increased dioptic strength." Finally, Lieberman column 3 lines 35-56, column 3 lines 57-64, and column 8 lines 1-13 teach away from a radially symmetric intra ocular lens.

In contrast to Lieberman's teachings, this application discloses a radially symmetric diffractive pattern. See for example page 23 lines 16 et seq. ("Examples of equations for the surface profile are ..." wherein the equation that follows is only a function of constants and distance from the optical axis.).

In contrast to Lieberman, amended claim 216 recites "A diffractive multifocal intraocular lens ... wherein said diffractive pattern is symmetric about said optical axis." Since Lieberman is

limited to a lens having a diffractive pattern that is asymmetric about the optical axis and Lieberman teaches away from a lens that is symmetric about the optical axis, Lieberman and the other prior art fail to disclose or suggest claim 216.

The applicant also amends claim 219 to define a lens structure having a functional property. Such a claim recitation is proper. See In re Swinehart, 439 F.2d 210, 169 USPQ 226 (CCPA 1971)("We are convinced that there is no support, either in the actual holdings of prior cases or in the statute, for the proposition, put forward here, that "functional" language, in and of itself, renders a claim improper. We have also found no prior decision of this or any other court which may be said to hold that there is some other ground for objecting to a claim on the basis of *any* language, "functional" or otherwise, beyond what is already sanctioned by the provisions of 35 U.S.C. 112."). Accordingly, the rejection of claim 219 as indefinite, is no longer proper. The 112 rejection of claim 220 was due to its dependence on claim 219. Therefore, the 112 rejection of claim 220 is also no longer proper.

In view of the foregoing, the applicant believes that claims 216-233 are now in condition for allowance.

The applicant also formally amends claim 216 to recite "defining an optical axis ... a first surface ... said first surface having a first shape and ... [[a]] said first shape... said optical axis." These amendments are non-substantive. They merely provide or refer to literal antecedent basis for the recitations "said first surface" and "said optical axis".

The applicant also formally amends claim 217 for clarity.

The applicant also formally amends claims 227, 232, and 233 for grammar, spelling, and to refer to literal antecedent basis. None of these amendments are substantive.

New dependent claims 234-243 depend from claim 216 and are non-obvious at least for the reasons applicable to claim 216.

## III. INDEPENDENT CLAIM 244

In contrast to Lieberman's teachings, this application discloses an intraocular lens having a radially symmetric base curvature. See for example page 7 lines 8-9 ("Preferably the lens has at least one surface described as a nonsphere or other conoid of rotation."); page 14 lines 19 et seq. ("...prolate surface following the formula..." wherein the specified formula is only a function of

radius from the z axis); and examples 1-4 on page 25 et seq., in which the sag equations are a function of only radial distance from optical axis.

In contrast to Lieberman, claim 244 recites "A diffractive multifocal intraocular lens ... wherein said first shape is symmetric about said optical axis; and wherein said second shape is symmetric about said optical axis." Since Lieberman is limited to a lens that is asymmetric about the optical axis and Lieberman teaches away from a lens that is symmetric about the optical axis, Lieberman and the other prior art fail to disclose or suggest claim 244.

Dependent claims 245-264 depend from claim 244 and are non-obvious at least for the reasons applicable to claim 244.

## IV. SUPPORT FOR NEW DEPENDENT CLAIMS

The present application discloses a lens designed to reduce spherical aberration of a passing wavefront (see the specification at the paragraph spanning pages 13 and 14).

The present application also discloses a lens having a surface that has a curvature at a periphery thereof that is less than a curvature at the optical axis. For example, referring to attachment 1, equation 2.4 is a conoid equation that is substantially equivalent to, albeit different in form from, the conoid equation shown in Example 1 of the present application. With additional reference to Figure 2.2 in attachment 1, it will be appreciated that a surface describe by a conoid equation necessarily has, for a conic constant that is less than zero, a curvature at the periphery that is less than the curvature at the optical axis. As seen in Figure 2.2 of attachment 1, when Q is equal to zero, the conoid of rotation is a sphere having a constant curvature. By contrast, when Q is less than zero, the conoid of rotation is either an ellipsoid or a paraboloid, wherein curvature at a periphery thereof is seen to be less than curvature at the optical axis, Z. The present application teaches various embodiments of a conoid surface with a conic constant, cc, that is less than zero. For example, values of cc in the specification include: about -1.02 (end of paragraph spanning pages 14 and 15, page 28 table 4); less than zero (page 51 line 3, page 15 line 12); -29.32 (page 26 line 6); -2.53 (page 27 line 9); between -1 and 0 (page 14 third line from the bottom); -0.26 (page 32 line 2); and -1.018 (page 32 line 3).

The present application also discloses that the IOL surface may be prolate or a modified conoid. See paragraph spanning pages 14 and 15.

The present application also discloses formulas describing an IOL surface as a sum of a conoid of rotation and one or more polynomial terms. See for example the paragraph spanning pages 14 and 15 and the description of the examples at pages 24-30. These pages also include description of the ranges and values of conic constants.

These various disclosures of a lens designed to reduce spherical aberration, that has a negative spherical aberration, that has a curvature at a periphery thereof that is less than a curvature at the optical axis, that has surfaces that are prolate, conoid, or modified conoid, and ranges and values of conic constants, support the newly added dependent claims.

V. **SUMMARY**

The claims should now be in condition for allowance. If the examiner has any concerns he is urged to telephone me at 703-415-0012 extension 21 to advance prosecution.

Respectfully submitted,

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